

HPS

High-Performance Subwoofers
Model HPS-500
Model HPS-1000

Owner's Manual



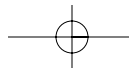
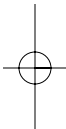
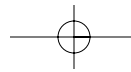


TABLE OF CONTENTS

Caution.....	3
Important Safety Instructions.....	4
Introduction.....	5
About This Product.....	5
Unpacking the Subwoofer.....	5
A Few Suggestions.....	5
Volume Control.....	5
Positioning.....	6-7
Identification of Front Panel Control.....	8
Controls.....	8
Connecting Your Subwoofer.....	9-11
Operation.....	12
Set Controls.....	12
Power On.....	12
Adjust Gain.....	12
Crossover Adjustments.....	12
Phase Control.....	12
A Word of Advice.....	13
Overdrive Protection.....	13
A Word About Tone Controls.....	13
Care of Your Subwoofer.....	14
Feedback.....	14
In Case of Trouble With Your Subwoofer.....	14
Specifications.....	15





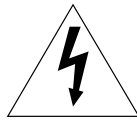
CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

**WARNING: SHOCK HAZARD – DO NOT OPEN.
AVIS: RISQUE DE CHOC ELECTRIQUE – NE PAS OUVRIR.
CUIDADO: PELIGRO DE CHOQUE ELÉCTRICO – NO ABRIR.**

**CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED PERSONNEL**

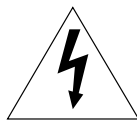
THIS INFINITY PRODUCT IS DESIGNED FOR 120-VOLT USE ONLY! FOR DETAILED SAFETY PRECAUTIONS, PLEASE SEE FOLLOWING PAGE IN THIS OWNER'S MANUAL FOR "IMPORTANT SAFETY INSTRUCTIONS."



The lightning flash with arrowhead symbol, within an equilateral triangle, intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

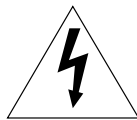


L'éclair avec le symbole de la flèche, placé dans les limites d'un triangle équilatéral est prévu pour avertir l'utilisateur de la présence de "tension dangereuse" non isolée dans l'enceinte du produit qui pourrait être d'une importance suffisante pour présenter un risque d'électrocution aux personnes.



Le point d'exclamation dans un triangle équilatéral est prévu pour avertir l'utilisateur de la présence d'instructions importantes pour les opérations et l'entretien (service) dans les manuels fournis avec l'appareil.

ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

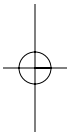


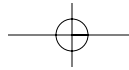
Este destello luminoso con un símbolo de punta de flecha dentro de un triángulo equilateral tiene el objetivo de alertar al usuario sobre la presencia de "voltaje peligroso" no aislado dentro de la caja del producto que puede ser de magnitud lo suficientemente grande para constituir un riesgo de choque eléctrico para las personas.



Este punto de exclamación dentro de un triángulo equilateral tiene el objetivo de alertar al usuario sobre la existencia de instrucciones operativas y de mantenimiento (servicio) importantes en la literatura que acompaña el aparato.

CUIDADO: PARA REDUCIR EL RIESGO DE CHOQUE ELÉCTRICO, NO RETIRE LA CUBIERTA (O RESPALDO). DENTRO NO HAY PIEZAS A LA ESCALA QUE EL USUARIO PUEDA DAR SERVICIO. REMITA EL SERVICIO AL PERSONAL DE SERVICIO CALIFICADO.





IMPORTANT SAFETY INSTRUCTIONS

1) Read Instructions – All the safety and operating instructions should be read before the product is operated.

2) Retain Instructions – The safety and operating instructions should be retained for future reference.

3) Heed Warnings – All warnings on the product and in the operating instructions should be adhered to.

4) Follow Instructions – All operating and use instructions should be followed.

5) Cleaning – Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Exception: A product that is meant for uninterrupted service and that for some specific reason, such as the possibility of the loss of an authorization code for a CATV Converter, is not intended to be unplugged by the user for cleaning or any other purpose, may exclude the reference to unplugging the product in the cleaning description otherwise required in number 5.

6) Attachments – Do not use attachments not recommended by the product manufacturer as they may cause hazards.

7) Water and Moisture – Do not use this product near water – for example, near a bathtub, washbowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.

8) Accessories – Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

9) A Product and Cart Combination Should Be Moved With Care – Quick stop, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

10) Ventilation – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

11) Power Sources – This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

12) Grounding or Polarization – This product may be equipped with a polarized alternating-current-line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

13) Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

14) Outdoor Antenna Grounding – If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size for grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.

15) Lightning – For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

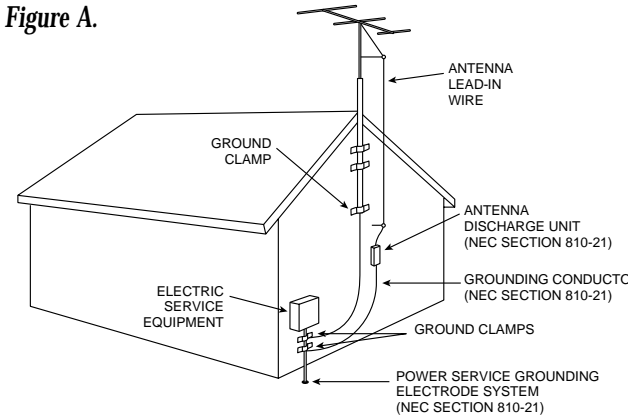
16) Power Lines – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

17) Overloading – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

18) Object and Liquid Entry – Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

19) Servicing – Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Figure A.



20) Damage Requiring Service – Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

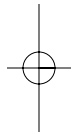
- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. An improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance – this indicates a need for service.

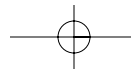
21) Replacement Parts – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

22) Safety Check – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

23) Wall or Ceiling Mounting – The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

24) Heat – The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.





ABOUT THIS PRODUCT...

IMPORTANT!

VOLUME CONTROL...

IMPORTANT!

INTRODUCTION

Infinity's HPS-500 and HPS-1000 subwoofers have been designed to enhance the bass frequency of any audio system. Both subwoofers may be used with speakers of any size. Obviously, the greatest bass enhancement will be achieved when the subwoofer is connected to speakers that do not have the capability to create deep bass.

UNPACKING THE SUBWOOFER

Check your subwoofer carefully. If it has been damaged in transit, report the damage immediately by calling your dealer and/or the trucking firm that delivered it.

To prevent fire or shock hazard, DO NOT EXPOSE THIS SUBWOOFER SYSTEM TO RAIN, EXCESSIVE MOISTURE OR PROLONGED DIRECT SUNLIGHT. To avoid electric shock, DO NOT OPEN THE SUBWOOFER! There are no user-serviceable parts inside. Observe all warnings and cautions.

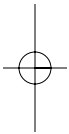
A FEW SUGGESTIONS

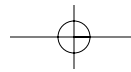
We recommend that you not operate your speakers or subwoofer with the bass, treble and loudness controls set to full boost. This will place undue strain on your electronics and speakers and could damage them.

The volume control setting on your preamplifier or stereo receiver is not a specific indication of the overall loudness level of the speakers. The only important consideration is the loudness level at which the system can be played regardless of where the volume control is set.

Always turn down the volume control setting on your preamplifier or stereo when changing cassette or CD, or switching inputs to AM or FM operation. Excessively loud transients (clicks or popping sounds) can damage the satellite speakers and possibly the subwoofer.

Whenever changing cables, pulling plugs, etc., ALWAYS TURN OFF ALL EQUIPMENT, including the subwoofer. This prevents transients from entering the speakers and prevents electric energy from reaching you. Keep all connections out of the reach of children.





**POSITION WITHIN
A ROOM WILL
STRONGLY INFLUENCE
PERFORMANCE...**

POSITIONING

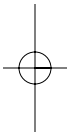
Since the installation of a subwoofer can be somewhat more complicated than installing full-range speakers, it is essential that you read this section very carefully prior to connecting the subwoofer to your system. Should you have questions relating to your installation, it is advisable to call either your dealer or Infinity's Customer Service Department for advice.

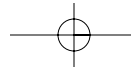
The performance of the subwoofer is directly related to its placement in the listening room and how you align the subwoofer with its satellite speakers. Setting the volume of the subwoofer in relationship to the left and right speakers is also of critical importance because it is essential that the subwoofer integrates smoothly with the entire system. Setting the subwoofer's volume level too high will result in an overpowering, boomy bass. Setting the volume level too low will negate the effect of the subwoofer.

We recommend placing the subwoofer at least 2 to 3 feet away from a television or a computer disc-drive system to prevent smearing the colors of the TV picture or erasing of the magnet drive.

Here are several additional facts on installation that may prove useful. It is generally believed by most audio authorities that low frequencies (below 125Hz) are nondirectional and, therefore, placement of a subwoofer within any listening room is not critical. While in theory it is true that the larger wavelengths, of extremely low frequencies, are basically nondirectional, the fact is that when installing a subwoofer within the limited confines of a room, reflections, standing waves and absorptions generated within the room will strongly influence the performance of any subwoofer system. As a result, specific location of the subwoofer becomes important, and we strongly recommend that you experiment with placement before choosing a final location.

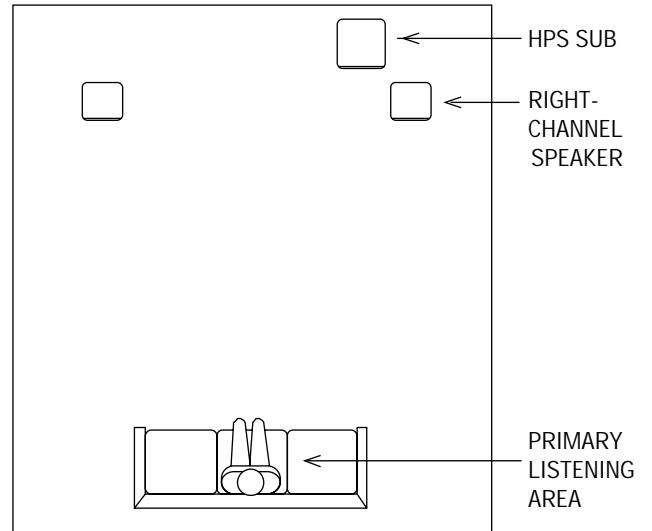
Placement will depend upon your room and the amount and quality of bass required (for example, whether or not your room permits placement of the subwoofer near either satellite speakers). The HPS-500 utilizes a downfiring woofer with a hyperflared port at the rear of the enclosure. Be sure to leave a minimum of six inches between the wall and the port on the HPS-500, or six inches between the wall and the passive radiators on the HPS-1000.





POSITIONING (Continued)

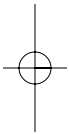
Figure 1. This view shows the subwoofer positioned behind the right-channel satellite speaker to re-create the actual location of bass instruments in an orchestra and/or add impact to movie sound tracks.

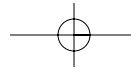


Here are some useful hints:

1. Experimentation with the position of your subwoofer may be useful.
2. If bass response seems inadequate, move it closer to a wall or corner.

It may take time and patience to find the most pleasing acoustic location for your subwoofer. Testing for sonic balance and blending should always be made from your normal listening position, using a wide range of source material. As a starting point, initially place the subwoofer behind your right-channel satellite speaker, six inches from the wall. We suggest trying this location first because, in an orchestra, the bass instruments are usually located in the back and to the right (see Figure 1). This position will also allow for emphatic, deep bass while playing movies.





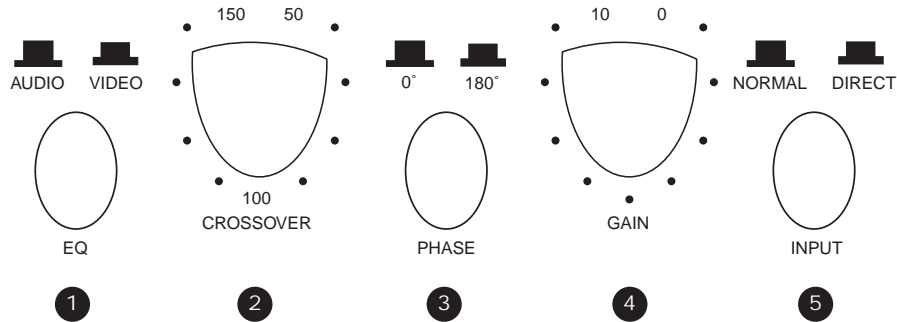
IDENTIFICATION OF FRONT PANEL CONTROL

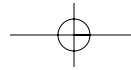
CONTROLS...

(Refer to Figure 2.)

1. EQ: Optimizes subwoofer performance for audio or video playback.
2. Crossover: Controls the frequency below which the subwoofer will begin working.
3. Phase: Reverse/normal switch changes audio-signal polarity.
4. Gain: Controls subwoofer volume level.
5. Input: Switches between the normal line/speaker inputs and the direct-LFE input.

Figure 2.

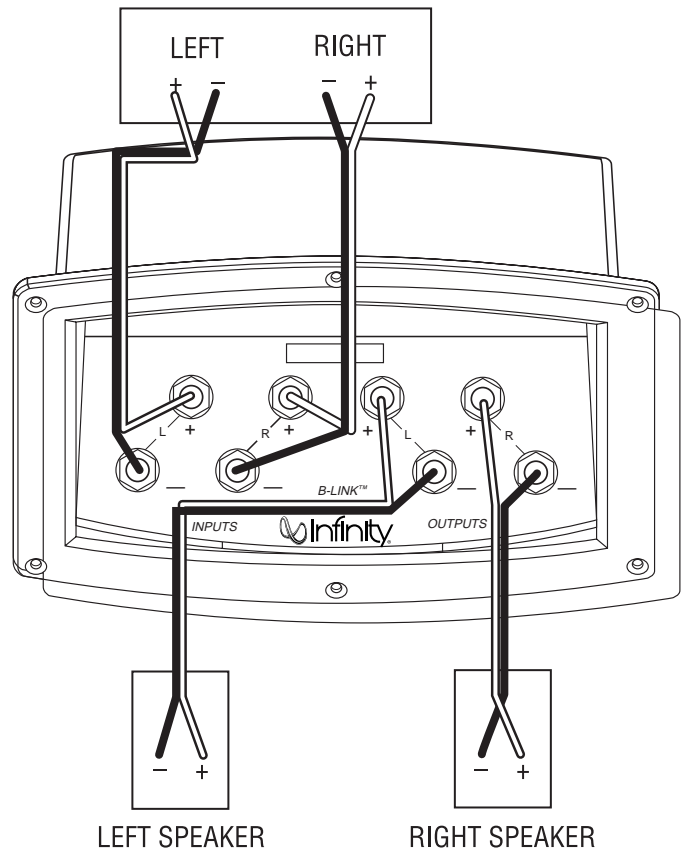


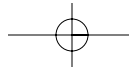


CONNECTING YOUR SUBWOOFER

If your receiver/processor does not have subwoofer outputs for the left and right channel

RECEIVER/AMPLIFIER Front Speaker Output



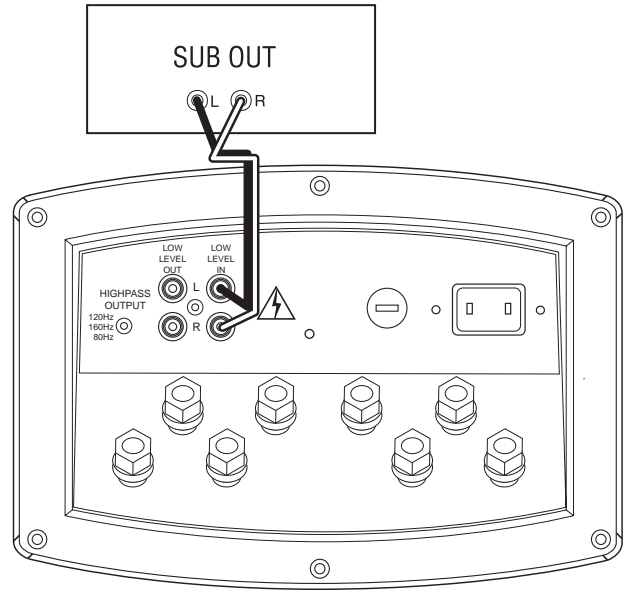


CONNECTING YOUR SUBWOOFER (Continued)

NOTE: Some receivers have a single subwoofer output (do not confuse this with a single LFE output as described below). In that case, it is recommended that you use a Y connector (not included) to maximize performance.

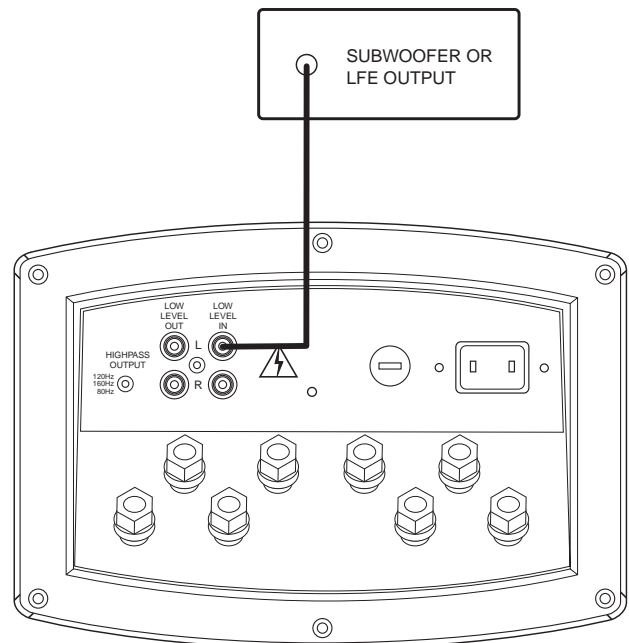
If your receiver/processor has subwoofer outputs for the left and right channels:

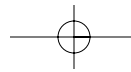
RECEIVER/PROCESSOR



NOTE: In this case, you do not need to use a Y connector. Simply connect the LFE output on your receiver/processor to either the left or right input on the subwoofer.

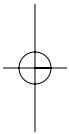
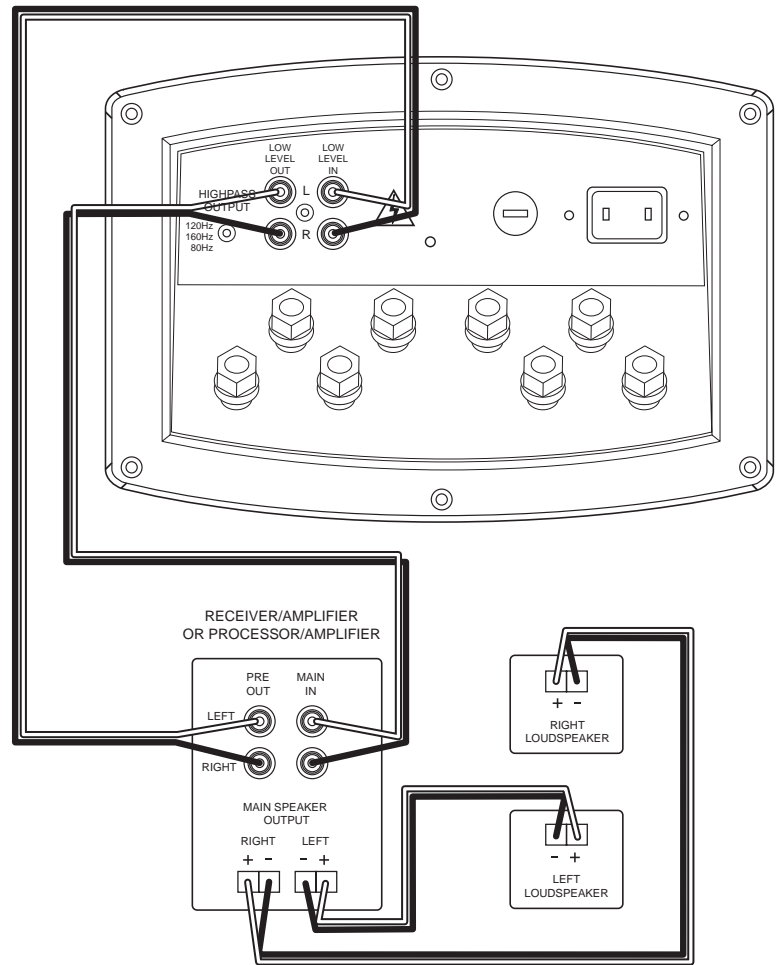
If you have a Dolby* Digital or DTS® receiver/processor with a low-frequency-effect (LFE) output:

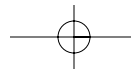




If your receiver/amplifier has preamp output jacks and main input jacks for the left and right channels or you have a separate preamp/processor and power amplifier:

This method of hookup can offer the highest level of performance for your complete loudspeaker system. Your subwoofer incorporates an adjustable high-pass crossover *in addition* to a variable low-pass crossover. When hooked up as shown below, the subwoofer will limit the low-frequency information that is returned to your receiver/amplifier. Your receiver/amplifier does not need to waste valuable power reproducing the low frequencies. In addition, since no low-frequency information is being sent to your main loudspeakers, they are able to reproduce mid and high frequencies with greater clarity.





SET CONTROLS...

POWER ON...

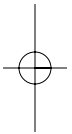
ADJUST GAIN...

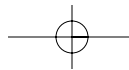
CROSSOVER ADJUSTMENTS...

PHASE CONTROL...

OPERATION

1. Initially set the HPS's Gain control to the "O" position.
2. Initially set the HPS's Crossover control to the 100Hz position.
3. Plug your HPS's AC cord into a wall outlet. Do not use the outlets on the back of the receiver.
4. Turn on your HPS sub by pressing the power button on the center of the front panel.
5. Turn on your entire audio system and start a CD or movie sound track at a moderate level.
6. Turn your HPS's Gain control ④ (Figure 2) up to the "5" position (half way). If no sound emanates from the subwoofer, check the AC-line cord and input cables. Are the connectors on the cables making proper contact? Is the AC plug connected to a "live" receptacle? Has the power button been pressed to the "on" position? (Note: A green indicator on the front panel will light when the power is on.) Once you have confirmed that the subwoofer is active, proceed by playing a CD, record or cassette. Use a selection that has ample bass information.
7. Set the overall volume control of the preamplifier or stereo to a comfortable level. Adjust the subwoofer's Gain control ④ (Figure 2) until you obtain a pleasing blend of bass. Bass response should not overpower the room but rather be adjusted so there is a harmonious blend across the entire musical range. Many users have a tendency to set the subwoofer volume too loud, adhering to the belief that a subwoofer is there to produce lots of bass. This is not entirely true. A subwoofer is there to enhance bass, extending the response of the entire system so the bass can be felt as well as heard. However, overall balance must be maintained or the music will not sound natural. An experienced listener will set the volume of the subwoofer so its impact on bass response is always there but never obtrusive.
8. Crossover Control ② (Figure 2) – The Low-Pass control determines the highest frequency at which the subwoofer reproduces sounds. If your main speakers can comfortably reproduce some low-frequency sounds, set this control to a lower frequency setting, between 50Hz – 100Hz. This will concentrate the subwoofer's efforts on the ultradeep bass sounds required by today's films and music. If you are using smaller bookshelf speakers that do not extend to the lower bass frequencies, set the low-pass crossover control to a higher setting, between 120Hz – 150Hz.
9. The Phase Control ③ (Figure 2) determines whether the subwoofer speaker's piston-like action moves in and out with the main speakers, 0°, or opposite the main speakers, 180°. Proper phase adjustment depends on several variables such as room size, subwoofer placement and listener position. Adjust the phase switch to maximize bass output at the listening position.
10. The EQ switch, located on the front panel, optimizes the subwoofer's performance for both movie and music listening. When in the "Video" position, a special EQ circuit is activated, enhancing low frequencies by approximately 3dB at 32Hz and delivering the full impact and excitement of today's movie soundtracks. When in the "Audio" position, the subwoofer provides the accurate and linear frequency response that is ideal when natural tonal balance is desired for music listening.
11. Remember: every system, room and listener is different. There are not necessarily any right or wrong settings; any setting you choose will result in excellent performance. Should you decide to fine-tune your system for optimum performance, be patient and trust your ears. It will be worth the effort involved to fully "tweak" your system.





A WORD OF ADVICE

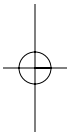
The low-frequency Crossover and Volume controls may be set anywhere within their rotation. However, it will be a most unusual circumstance if you have to set the Volume control completely clockwise. This may indicate an unbalanced condition in your system (too much bass), that the system is in an especially large room, or that speaker placement may be incorrect. Try several other locations before concluding that the Volume control must be set at maximum.

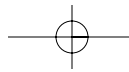
OVERDRIVE PROTECTION

Automatic limiting circuitry helps prevent overdriving a connected subwoofer by softly clipping the input signal if it exceeds a predetermined threshold. Depending on the level, you may or may not hear slight distortion on musical peaks. This protection is completely automatic, with no user adjustments. However, if you do hear distortion continuously while playing music, the input signal level (feeding the HPS) may be too high and should be lowered. If this does not solve the problem, check the connections and that the other components in the audio chain are operating properly.

A WORD ABOUT TONE CONTROLS

The tone controls on your electronic components (preamplifier, receiver, etc.) should be used with the utmost discretion. Excessive boost can create severe power demands on your power amplifier. Maximum bass boost can create a demand for literally hundreds of watts in the bass region, whereas in the "flat" position, or with the tone controls switched out of the system, your average listening level may be impressively and realistically loud at fewer than 10 watts. The remaining power capacity required is on reserve for power peaks on sharp transients and powerful crescendos.





CARE OF YOUR SUBWOOFER

Your Infinity subwoofer enclosure is finished with a heavy-duty, high-quality vinyl that requires very little maintenance. Keep the enclosure clean by dusting it occasionally with a damp cloth.

FEEDBACK

If the bass seems boomy, or you notice a rumbling sound when listening to record albums, the cause may be acoustic feedback. This means that low-frequency vibrations from your speakers are reaching the turntable. To help isolate the turntable from these vibrations, place the turntable on a heavy, solid support, as far away as possible from the subwoofer. If you continue to experience difficulties after experimenting with placement, consult your Infinity dealer.

IMPORTANT!

CD players are also susceptible to vibrations and should be placed on solid supports to isolate them acoustically. Another way to isolate the CD player is to place it on four isolation feet available at your local dealer.

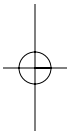
IN CASE OF TROUBLE WITH YOUR SUBWOOFER

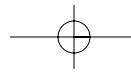
If the subwoofer sound is distorted, stops playing or otherwise seems to be malfunctioning, first determine if the problem is in the subwoofer or the wiring and/or other audio components. If the problem also affects the satellite speakers, the cause is most likely in your electronics. If it is only noticed in the subwoofer, make sure that all connecting cables are correct and in proper working condition. Make sure the subwoofer is plugged in and turned on.

IMPORTANT!

If everything seems to be in good working order and the subwoofer still malfunctions, **DO NOT ATTEMPT ANY REPAIRS!** Contact your Infinity dealer and get the name of the authorized Infinity service center near you. If there is no facility near you, contact Infinity Customer Service Department at (800) 553-3332, or write:

Infinity Systems, Inc. – CUSTOMER SERVICE
250 Crossways Park Drive, Woodbury, NY 11797 USA





SPECIFICATIONS

HPS-500

FREQUENCY RESPONSE

22 ~ 120Hz

AMPLIFIER POWER

500 Watts

DRIVE UNIT

15" Downfiring Woofer with Hyperflared Port

FINISH

Embossed Dark-Metallic Bronze with Bronze-Metallic Accents

DIMENSIONS

Height, Width, Depth: 19-3/4 x 19 x 22-7/16"
(502 x 483 x 570mm)

HPS-1000

FREQUENCY RESPONSE

18 ~ 120Hz

AMPLIFIER POWER

1000 Watts

DRIVE UNIT

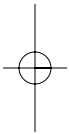
15" Downfiring Woofer and
Two 15" Passive Radiators

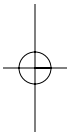
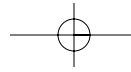
FINISH

Embossed Dark-Metallic Bronze with Bronze-Metallic Accents

DIMENSIONS

Height, Width, Depth: 21-7/8 x 20-7/16 x 23-13/16"
(556 x 519 x 605mm)





Infinity continually strives to update and improve existing products, as well as create new ones. The specifications and construction details in this and related Infinity publications are therefore subject to change without notice.

© 1998 Infinity Systems, Inc., 250 Crossways Park Drive, Woodbury, NY 11797 USA
(800) 553-3332
www.infinitysystems.com

*Trademark of Dolby Laboratories.
DTS is a trademark of Digital Theater Systems, Inc.
Infinity is a registered trademark of Infinity Systems, Inc.

■ A Harman International Company

Part No. 333612-00